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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

David W. CANNELL *et al.*

Application No.: 09/820,934

Filed: March 30, 2001

For: HEAT ACTIVATED DURABLE
CONDITIONING COMPOSITIONS
COMPRISING C₁ TO C₂₂
SUBSTITUTED C₃-C₅
MONOSACCHARIDES AND
METHODS FOR USING THE
SAME

) Group Art Unit: 1615

) Examiner: L. Channavajjala

) Confirmation No.: 4153

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Sir:

APPEAL BRIEF UNDER BOARD RULE § 41.37

In support of the Notice of Appeal filed July 18, 2005, and further to Board Rule 41.37, Appellants present this Appeal Brief. A check for the fee of \$500.00 required under 37 C.F.R. § 1.17(c) is enclosed. A Notice of Panel Decision from Pre-Appeal Brief Review was mailed August 30, 2005, resetting the period for responding to one month from the mailing date of that decision. In view of the concurrently filed petition for a one month extension of time, this Brief is due Monday, October 31, 2005, and is timely filed.

This Appeal responds to the April 18, 2005, final rejection of claims 1-9, 13-19 and 29-59, which are set forth in the attached Appendix. If any additional fees are

required or if the enclosed payment is insufficient, Appellants request that the required fees be charged to Deposit Account No. 06-0916.

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I. **REAL PARTY IN INTEREST**

L'ORÉAL S.A. is the assignee of record, as evidenced by the assignment document filed in the U.S. Patent and Trademark Office on July 10, 2001, and recorded at Reel 011965 and Frame 0857.

II. RELATED APPEALS AND INTERFERENCES

There are currently no other appeals or interferences, of which Appellants, Appellants' legal representative, or Assignee are aware, that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-186 are pending in this application. Claims 1-9, 13-19 and 29-59 stand rejected and are being appealed.¹ Claims 10-12, 20-28 and 60-168 stand withdrawn as drawn to a nonelected invention. A complete listing of the pending claims is included in the attached appendix.

¹ In the Notice of Panel Decision mailed August 30, 2005, the Office indicated that claims 29-32 and 43-55 would be allowable if rewritten in independent form.

IV. STATUS OF AMENDMENTS

No amendments have been made in response to the Final Office Action mailed

April 18, 2005.

V. SUMMARY OF CLAIMED SUBJECT MATTER

A. Overview of the Claimed Subject Matter

Shampoos generally comprise surfactants, such as anionic surfactants, to clean the hair. Specification, page 1, lines 8-9.² Anionic surfactants, however, not only remove the dirt and soil but also remove the naturally-present sebum from hair, resulting in hair that is extremely difficult to comb, that is not amenable to styling, and that may have undesirable electrostatic properties, causing the hair to "fly away." *Id.*, page 1, lines 9-13. Due to the unsatisfactory condition of shampooed hair, many consumers use a conditioning composition to improve at least one of the undesirable characteristics.. *Id.*, page 1, lines 13-15. Conditioning agents, such as quaternized ammonium compounds, interact ionically with hair fibers to coat the hair shaft. *Id.*, page 1, lines 16-22. The weak ionic bond formed is then easily removed by washing, however, so that the conditioning effect is usually only temporary. *Id.*, page 2, lines 5-22. Thus, there is a need for compositions and methods that impart a durable conditioning to the hair. *Id.*, page 3, lines 1-2.

Sugars have been applied to hair for countless reasons, however, not all sugars are the same and not all sugars impart the same properties when applied to a keratinous fiber. *Id.*, page 4, lines 1-4. The inventors have found that a composition comprising at least one compound comprising at least two quaternary ammonium groups and at least one sugar chosen from C₃ to C₅ monosaccharides substituted with

² The references to the specification in this Brief are merely intended to facilitate explaining how the application provides exemplary disclosure relating to the claimed subject matter. Those references are not necessarily exhaustive. Furthermore, those references should not be construed as limiting the claims.

at least one C₁ to C₂₂ carbon chain produces a composition for durable conditioning of at least one keratinous fiber. *Id.*, page 4, lines 14-20. In particular, the inventors have discovered that such compositions and methods using those compositions comprising applying them to at least one keratinous fiber and heating the at least one keratinous fiber impart a durable conditioning to the at least one keratinous fiber. *Id.*, page 4, lines 8-12. Durable conditioning means that, following at least six shampoos after treatment, treated hair still remains in a more conditioned state as compared to untreated hair. *Id.*, page 6, lines 6-8. The state of conditioning can be evaluated by measuring, and comparing, the ease of combability of the treated hair and of the untreated hair in terms of combing work and/or the substantivity of the conditioning agent on the hair. *Id.*, page 6, lines 8-11. The compositions of the invention may also be used to care for, or treat, the at least one keratinous fiber. *Id.*, page 4, lines 12-13.

B. Support for the Claimed Subject Matter

The subject matter of independent claim 1 is a composition for durable conditioning of at least one keratinous fiber comprising: (a) at least one compound comprising at least two quaternary ammonium groups; and (b) at least one sugar chosen from chosen from C₃ to C₅ monosaccharides substituted with at least one C₁ to C₂₂ carbon chain, wherein said at least one compound and at least one sugar are present in an amount effective to durably condition said at least one keratinous fiber. *Id.*, page 4, lines 14-20. As recited in claims 57 and 59, in some applications, the keratinous fiber is hair, and the composition is heat activated. *E.g., id.*, page 8, lines 17-18.

The nature of the at least two quaternary ammonium groups of the composition is further described in the specification and recited in claims 2-8. *Id.*, page 10, line 3 to page 14, line 11. Polyquaternium-10, recited in claim 9, is one of the compounds that the specification describes as comprising at least two quaternary ammonium groups. *Id.*, page 14, lines 12-13. As recited in claim 13, the specification also discloses that the at least one compound comprising at least two quaternary ammonium groups can further comprise at least one counterion. *Id.*, page 14, line 19 to page 15, line 2. The amount of the compound comprising at least two quaternary ammonium groups is recited in claims 14 and 15, and disclosed in the specification on page 15. *Id.*, page 15, lines 3-12.

The subject matter of claims 16-19 further defines the at least one sugar chosen from chosen from C₃ to C₅ monosaccharides substituted with at least one C₁ to C₂₂ carbon chain and is described on pages 15-17 of the specification. In particular, the specification notes that the C₃ to C₅ monosaccharide can be a pentose, including aldopentoses, such as xylose, arabinose, lyxose, and ribose, and including ketopentoses, such as ribulose and xylulose. *Id.*, page 15, lines 13-22. The derivatives recited in claims 29-31 are also described, including the imine, hemiacetal, hemiketal, and oxidized derivatives, and oligosaccharides, including xylobiose. *Id.*, page 16, lines 5-19.

Further details regarding the at least one C₁ to C₂₂ carbon chain with which the C₃ to C₅ monosaccharides is substituted are also provided in the specification on pages 16 and 17. As recited in claim 33, the C₁ to C₂₂ carbon chains can be linear, branched, or cyclic. *Id.*, page 16, lines 20-21. In addition, those chains can be saturated or

unsaturated, as recited in claims 33 and 34. *Id.*, page 16, line 21 to page 17, line 1.

The specific C₁₆ to C₁₈, C₁₆ or C₁₈, linear hexadecyl and linear octadecyl forms of the C₁ to C₂₂ carbon chains, as recited in claims 35-38, are also described. *Id.*, page 17, lines 2-6. Substitutions of the sugar with the C₁ to C₂₂ carbon chains can occur at any location on the sugar, and the specification describes substitutions such as those at the C₁ position and at at least one hydroxyl, recited in claims 39 and 40. *Id.*, page 17, lines 7-19. Claims 41 and 42 recite the amount of the at least one sugar by weight relative to the total weight of the composition, and the specification discloses that the amount can range from 0.01% to 10%, and can range from 0.1% to 5%. *Id.*, page 18, lines 1-3.

As recited generally in claim 43, the composition can further comprise at least one additional sugar. *Id.*, page 18, lines 4-9. The additional sugar, as recited in claim 44, is chosen from monosaccharides, oligosaccharides, and polysaccharides. *Id.*, page 18, lines 10-19. The monosaccharides are chosen from hexoses, as recited in claim 45, which are in turn chosen from allose, altrose, glucose, mannose, gulose, idose, galactose, talose, sorbose, psicose, fructose, and tagatose, as recited in claim 46. *Id.*, page 18, lines 10-9-15.

The at least one additional sugar may also be substituted with at least one C₁ to C₂₂ carbon chain (claim 47), and the chain may be a linear, branched or cyclic chain that is saturated or unsaturated (claim 48). *Id.*, page 18, line 20 to page 19, line 2. Specific C₁₆ to C₁₈, C₁₆ or C₁₈, linear hexadecyl and linear octadecyl forms of the C₁ to C₂₂ carbon chains, as recited in claims 49-52, are described. *Id.*, page 17, lines 2-6. The amount of the at least one additional sugar by weight relative to the total weight of

the composition, as recited in claims 54 and 55, includes amounts ranging from 0.01% to 10%, and from 0.1% to 5%. *Id.*, page 19, lines 9-11.

As recited in claim 56, the composition can take various forms, including a liquid, oil, paste, stick, dispersion, emulsion, lotion, gel, or cream. *Id.*, page 19, lines 12-17. The composition can also further comprise, as recited in claim 58, at least one suitable additive chosen from anionic surfactants, cationic surfactants, nonionic surfactants, amphoteric surfactants, fragrances, penetrating agents, antioxidants, sequestering agents, opacifying agents, solubilizing agents, emollients, colorants, screening agents, preserving agents, proteins, vitamins, silicones, polymers, plant oils, mineral oils, and synthetic oils. *Id.*, page 19, line 18 to page 20, line 8.

VI. Grounds of Rejection

A. Claims 1-9, 13-19 and 29-59 stand rejected under the judicially created doctrine of obviousness-type double patenting as allegedly unpatentable over claims in U.S. Patent No. 6,486,105 and copending application no. 09/821,480.³

B. Claims 1-9, 13-19 and 29-59 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. Patent No. 6,495,498 to Niemiec et al. (Niemiec) and U.S. Patent No. 5,688,930 to Bertho et al. (Bertho).⁴

³ Appellants filed a Terminal Disclaimer with respect to U.S. Patent No. 6,486,105 and copending application no. 09/821,480 on July 18, 2005. The Image File Wrapper includes a form indicating the Terminal Disclaimer was approved. However, Appellants have not as yet received any official indication that the obviousness-type double patenting rejection of record has been obviated.

⁴ In the Notice of Panel Decision mailed August 30, 2005, the Office indicated that claims 29-32 and 43-55 would be allowable if rewritten in independent form.

VII. ARGUMENT

Each claim of the present application is separately patentable, and upon issuance of a patent will be entitled to a separate presumption of validity under 35 U.S.C. § 282. The arguments set forth below are arranged under subheadings, and in accordance with 37 C.F.R. § 41.37(c)(1)(vii), these subheadings indicate the claims for which patentability is argued separately.

A. Claims 1-9, 13-19 and 29-59 Are Patentable Under the Judicially-Created Doctrine of Obviousness-Type Double Patenting

In the final Office Action, the Office maintained its rejection of claims 1-9, 13-19 and 29-59 under the judicially created doctrine of obviousness-type double patenting as allegedly unpatentable over claims in U.S. Patent No. 6,486,105 and copending application no. 09/821,480. Final Office Action, page 2.

“A rejection based on a nonstatutory type of double patenting can be avoided by filing a terminal disclaimer in the application or proceeding in which the rejection is made.” M.P.E.P. § 804.02.II (citing *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Knohl*, 386 F.2d 476, 155 USPQ 586 (CCPA 1967); and *In re Griswold*, 365 F.2d 834, 150 USPQ 804 (CCPA 1966)). Further, “[t]he filing of a terminal disclaimer to obviate a rejection based on nonstatutory double patenting is not an admission of the propriety of the rejection.” *Id.* (citing *Quad Environmental Technologies Corp. v. Union Sanitary District*, 946 F.2d 870, 20 USPQ2d 1392 (Fed. Cir. 1991)).

On July 18, 2005, Appellants filed a Terminal Disclaimer along with the Notice of Appeal. The Image File Wrapper for this application includes a form indicating that the

Office approved the Terminal Disclaimer. Accordingly, Appellants respectfully submit that the rejection of record has been obviated.

B. Claims 1-9, 13-19 and 33-42 and 56-59 Are Patentable Under 35 U.S.C.

§ 103(a)

Claims 1-9, 13-19 and 29-59 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. Patent No. 6,495,498 to Niemiec et al. (Niemiec) and U.S. Patent No. 5,688,930 to Bertho et al. (Bertho).⁵ Final Office Action, page 2.

Appellants respectfully submit that the Office has not met its burden for establishing a *prima facie* case of obviousness. The rejection of record provides no reason, suggestion, or motivation in the prior art to lead one of ordinary skill in the art to combine the teachings of the references in the manner proposed. *See Pro-Mold and Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573 (Fed. Cir. 1996); M.P.E.P. § 2143. A rejection cannot be predicated on the mere identification of individual components of claimed limitations. *In re Kotzab*, 217 F.3d 1365, 1371 (Fed. Cir. 2000). Particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed. *Id.*

The claims recite a composition comprising at least one compound comprising at least two quaternary ammonium groups and at least one sugar chosen from C₃ to C₅ monosaccharides substituted with at least one C₁ to C₂₂ carbon chain. Niemiec teaches cleansing compositions comprising a water soluble silicone agent, a cationic

⁵ In the Notice of Panel Decision mailed August 30, 2005, the Office indicated that claims 29-32 and 43-55 would be allowable if rewritten in independent form.

conditioning agent, and at least one detergent. Col. 2, lines 25-32. Possible cationic conditioning agents are listed at col. 5, line 38 to col. 6, line 42. Among those listed are cationic cellulose derivatives, such as Polyquaternium-10. Col. 6, lines 2-8. Other cationic conditioning agents are most preferred, however. Col. 6, lines 39-42. To select Polyquaternium-10 as the cationic conditioning agent, therefore, one would not only have to disregard those cationic conditioning agents Niemeic teaches as most preferred, but would have to select a cationic cellulose derivative from among the other classes of cationic conditioning agents disclosed. Yet no reasons are given as to why the ordinary artisan would have been motivated to select this one particular cationic conditioning agent from among the many possible, including more preferred, options.

The Office emphasizes that "while Polyquaternium-10 is described as one of many cationic conditioning agents, Neimeic (sic) also specifically teaches the compound as one of the few (not a laundry list) film forming agents for hair application." Final Office Action, page 4. A careful review of the context for those film forming agents, however, also reveals that the ordinary artisan would arrive at Polyquaternium-10 only by engaging in significant picking and choosing. Specifically, in the embodiment upon which the Office relies, the cleansing composition is formulated with a "benefit agent." Col. 11, lines 41-44. Benefit agents can be any of approximately 66 active ingredients. See col. 11 at line 56 to col. 12 at line 12. Among this multitude of active ingredients, Niemeic lists film formers. Col. 11, lines 56-59. Polyquaternium-10 is included among the 6 nonexclusive examples of film formers (excluding the possible mixtures). Col. 13, lines 1-8.

The ordinary artisan, absent motivation to specifically select Polyquaternium-10, has only a 1 in 66 chance of selecting a film former from among the possible benefit agents, and then at best a 1 in 6 chance of selecting Polyquaternium-10 from the list of film formers. The Office is not permitted to pick and choose individual components without proper evidence of motivation or suggestion. Here, the Office engages in a multi-step selection process that improperly uses Appellants' invention as a blueprint for hindsight reconstruction of the claimed invention. The Federal Circuit and its predecessor have long held that using the claimed invention as a blueprint to coble together prior art is improper. *See Grain Processing Corp. v. American Maize-Products Co.*, 840 F.2d 902, 5 U.S.P.Q.2d 1788 (Fed. Cir. 1988); *In re McLaughlin* 443 F.2d 1392, 170 U.S.P.Q. 209 (C.C.P.A. 1971); M.P.E.P. §§ 2143.01, 2145.X.A. Appellants respectfully submit that the Office has not met its burden for establishing a *prima facie* case of obviousness because neither Niemiec's teachings, nor any arguments made by the Office, provide a reason, suggestion, or motivation to select the claimed composition by first selecting a film former as the benefit agent and then specifically selecting Polyquaternium-10.

Similarly, although Niemiec teaches the inclusion of a detergent, i.e., a surfactant, in Niemiec's cleansing composition, Niemiec's list of suitable detergents at column 6 to column 7 is extensive. Among that list is the subcategory of nonionic surfactants. Col. 7, lines 9-19. Long chain alkyl glucosides are included as one of several (non-limited) possible nonionic surfactants, but, as with the selection of Polyquaternium-10, other nonionic surfactants besides the alkyl glucoside are preferred. Col. 7, lines 14-15. Once again, substantial picking and choosing from among

numerous possible surfactants would still be required in order to arrive at an alkyl glucoside. However, even if, assuming for the sake of argument, one somehow managed to pick the alkyl glucoside from among the many possible surfactants, this is still not enough to lead one to the claimed invention. An alkyl glucoside is a C₆ monosaccharide, which is outside the scope of the claims.

Although the Office acknowledges that Niemiec does not teach incorporating the claimed C₃ to C₅ monosaccharides as surfactants, Final Office Action, page 3, it continues to assert that it would have been obvious to add the alkyl pentosides taught by Bertho into the hair care composition of Niemiec containing Polyquaternium-10 hair conditioner. *Id.* According to the Office, it is enough that "Bertho states that alkyl pentosides are suitable as anionic surfactants for hair applications and can be used with other surfactants, and exemplifies shampoo compositions (col. 19) having conditioning agents. The advantage of combining the alkyl polyglycosides comes from the teaching of Bertho that the compounds are cheap, act as a surfactant with enhanced foaming, emulsifying, and detergent power." *Id.*

The Office's proposed motivation focuses on the substitution of the alkyl pentoside mixture of Bertho for the alkyl glucoside of Niemiec. However, the Office's position disregards the fact that there is no motivation to select the alkyl glucoside, and that Niemiec lacks more than just a teaching of the alkyl pentoside. Instead, a multi-step selection of the alkyl glucoside plus the independent selection of the Polyquaternium-10 must take place before there can be any basis for substituting the alkyl glucoside with any C₃ to C₅ monosaccharide substituted with at least one C₁ to C₂₂ carbon chain, let alone the elected alkyl pentoside. Simply because references can be

modified or combined is not sufficient basis to establish a *prima facie* case of obviousness. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); M.P.E.P. § 2143.01. And even if the claimed limitations are within the capabilities of one skilled in the art, such capabilities, by themselves, are not sufficient to establish a *prima facie* case of obviousness. *In re Kotzab*, 217 F.3d at 1370, 55 U.S.P.Q.2d at 1318; M.P.E.P. § 2143.01.

The Office has failed to show that the ordinary artisan at the time the invention was made would have been motivated to select particular components of the composition of Niemiec, and then, having made this selection, to substitute the compound of Bertho in the composition. Accordingly, Appellants respectfully submit that the Office has not established a *prima facie* case of obviousness. For at least the foregoing reasons, Appellants respectfully submit this rejection is error and should be reversed.

C. Claims 29-32 and 43-55 Are Separately Patentable Under 35 U.S.C. § 103(a)

Appellants respectfully submit that claims 29-32 and 43-55 are independently patentably under 35 U.S.C. § 103(a). Claims 29-32 recite particular derivatives of C₃ to C₅ monosaccharides. Claims 43-55 recite a composition comprising at least one additional sugar. For the reasons set forth above, the Office has not established a *prima facie* case of obviousness with respect to independent claim 1. Further, the Office has not pointed to any teachings in the combination of Niemiec and Bertho that would motivate the ordinary artisan either to select derivatives of C₃ to C₅ monosaccharides or to include an additional sugar in the composition. In its Notice of

Panel Decision, mailed August 30, 2005, the Office acknowledged that claims 29-32 and 43-55 were allowable if rewritten in independent form. Accordingly, Appellants respectfully submit that claims 29-32 and 43-55 are independently patentable and that the final rejection of those claims should be reversed.

VIII. CONCLUSION

For the reasons given above, pending claims 1-9, 13-19 and 29-59 are allowable and reversal of the Office's rejections is respectfully requested. The Terminal Disclaimer filed with the Notice of Appeal obviated the obviousness-type double patenting rejection of record. Further, Appellants respectfully submit the Office has failed to establish that the claims are *prima facie* obvious over the cited references.

To the extent any extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this Appeal Brief, such extension is respectfully requested. If there are any fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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A. Claims Appendix to Appeal Brief Under Rule 41.37(c)(1)(viii)

1. (Original) A composition for durable conditioning of at least one keratinous fiber comprising:

(a) at least one compound comprising at least two quaternary ammonium groups; and

(b) at least one sugar chosen from C₃ to C₅ monosaccharides substituted with at least one C₁ to C₂₂ carbon chain,

wherein said at least one compound and at least one sugar are present in an amount effective to durably condition said at least one keratinous fiber.

2. (Original) A composition according to claim 1, wherein said at least two quaternary ammonium groups, which may be identical or different, are each chosen from ammonium groups which are quaternized and amine groups which are capable of being quaternized.

3. (Original) A composition according to claim 2, wherein said amine groups which are capable of being quaternized are chosen from primary amine groups, secondary amine groups, and tertiary amine groups.

4. (Original) A composition according to claim 1, wherein said at least two quaternary ammonium groups, which may be identical or different, are each chosen from substituent ammonium groups which are quaternized, substituent amino groups capable of being quaternized, ammonium groups which are quaternized which form part

of the skeleton of said at least one compound and amino groups capable of being quaternized which form part of the skeleton of said at least one compound.

5. (Original) A composition according to claim 1, wherein said at least one compound comprising at least two quaternary ammonium groups is chosen from:

- polymers comprising at least two quaternary ammonium groups derived from (i) at least one monomer unit comprising at least two quaternary ammonium groups as defined below and optionally (ii) at least one additional monomer unit different from said at least one monomer (i); and
- polymers comprising at least two quaternary ammonium groups derived from (i) at least one monomer comprising at least one quaternary ammonium group as defined herein and optionally (ii) at least one additional monomer unit.

6. (Original) A composition according to claim 5, wherein said at least one compound comprising at least two quaternary ammonium groups is chosen from:

- polymers comprising at least two quaternary ammonium groups derived from at least one vinyl monomer;
- cationic diallyl quaternary ammonium polymers comprising at least two quaternary ammonium groups;
- derivatives of polysaccharide polymers comprising at least two quaternary ammonium groups; and
- silicone polymers comprising at least two quaternary ammonium groups.

7. (Original) A composition according to claim 6, wherein said at least one compound comprising at least two quaternary ammonium groups is chosen from:
- polymers comprising at least two quaternary ammonium groups derived from at least one vinyl monomer substituted with at least one group chosen from dialkylaminoalkyl acrylate, dialkylaminoalkyl methacrylate, monoalkylaminoalkyl acrylate, monoalkylaminoalkyl methacrylate, trialkyl methacryloxyalkyl ammonium salts, trialkyl acryloxyalkyl ammonium salts and diallyl quaternary ammonium salts;
 - polymers comprising at least two quaternary ammonium groups derived from at least one vinyl quaternary ammonium monomer comprising at least one cyclic cationic nitrogen-containing ring;
 - copolymers comprising at least two quaternary ammonium groups derived from
 - (i) at least one vinyl monomer comprising at least one quaternary ammonium group and
 - (ii) at least one additional monomer chosen from acrylamide, methacrylamide, alkyl acrylamides, dialkyl acrylamides, alkyl methacrylamides, dialkyl methacrylamides, alkyl acrylate, alkyl methacrylate, vinyl caprolactone, vinyl pyrrolidone, vinyl esters, vinyl alcohol, maleic anhydride, propylene glycol, and ethylene glycol;
 - cationic cellulose comprising at least two quaternary ammonium groups;
 - cationic starch derivatives comprising at least two quaternary ammonium groups;
 - cationic guar gum derivatives comprising at least two quaternary ammonium groups; and
 - cellulose ethers comprising at least two quaternary ammonium groups.

8. (Original) A composition according to claim 7, wherein said at least one compound comprising at least two quaternary ammonium groups is chosen from polyquaternium-16; polyquaternium-11; quaternized poly(vinylamine); quaternized poly-4-vinyl pyridine; quaternized poly(ethyleneimine); polyquaternium-6; polyquaternium-7; polyquaternium-22; polyquaternium-39; polyquaternium-10; polyquaternium-24; quaternized starch; and amodimethicone.
9. (Original) A composition according to claim 7, wherein said at least one compound comprising at least two quaternary ammonium groups is polyquaternium-10.
10. (Withdrawn) A composition according to claim 7, wherein said at least one compound comprising at least two quaternary ammonium groups is polyquaternium-22.
11. (Withdrawn) A composition according to claim 7, wherein said at least one compound comprising at least two quaternary ammonium groups is poly(ethyleneimine).
12. (Withdrawn) A composition according to claim 7, wherein said at least one compound comprising at least two quaternary ammonium groups is quaternized starch.
13. (Original) A composition according to claim 1, wherein said at least one compound comprising at least two quaternary ammonium groups further comprises at least one counterion.
14. (Original) A composition according to claim 1, wherein said at least one compound comprising at least two quaternary ammonium groups is present in an

amount ranging from 0.01% to 10% by weight relative to the total weight of the composition.

15. (Original) A composition according to claim 14, wherein said at least one compound comprising at least two quaternary ammonium groups is present in an amount ranging from 0.1% to 5% by weight relative to the total weight of the composition.

16. (Original) A composition according to claim 1, wherein said C₃ to C₅ monosaccharides are chosen from pentoses.

17. (Original) A composition according to claim 1, wherein said pentoses are chosen from aldopentoses and ketopentoses.

18. (Original) A composition according to claim 17, wherein said aldopentoses are chosen from xylose, arabinose, lyxose, and ribose.

19. (Original) A composition according to claim 17, wherein said ketopentoses are chosen from ribulose and xylulose.

20. (Withdrawn) A composition according to claim 1, wherein said C₃ to C₅ monosaccharides are chosen from tetroses.

21. (Withdrawn) A composition according to claim 20, wherein said tetroses are chosen from aldotetroses and ketotetroses.

22. (Withdrawn) A composition according to claim 21, wherein said aldotetroses are chosen from erythrose and treose.
23. (Withdrawn) A composition according to claim 21, wherein said aldotetroses are chosen from erythrulose.
24. (Withdrawn) A composition according to claim 1, wherein said C₃ to C₅ monosaccharides are chosen from trioses.
25. (Withdrawn) A composition according to claim 24, wherein said trioses are chosen from aldotrioses and ketotrioses.
26. (Withdrawn) A composition according to claim 25, wherein said trioses are chosen from glyceraldehyde.
27. (Withdrawn) A composition according to claim 25, wherein said trioses are chosen from dihydroxyacetone.
28. (Withdrawn) A composition according to claim 1, wherein said C₃ to C₅ monosaccharides are chosen from furanoses and derivatives thereof.
29. (Original) A composition according to claim 1, wherein said C₃ to C₅ monosaccharides are chosen from derivatives of C₃ to C₅ monosaccharides.
30. (Original) A composition according to claim 29, wherein said derivatives of C₃ to C₅ monosaccharides are chosen from imine derivatives of C₃ to C₅ monosaccharides,

hemiacetal derivatives of C₃ to C₅ monosaccharides, hemiketal derivatives of C₃ to C₅ monosaccharides, and oxidized derivatives of C₃ to C₅ monosaccharides.

31. (Original) A composition according to claim 29, wherein said derivatives of C₃ to C₅ monosaccharides are chosen from oligosaccharides derived from C₃ to C₅ monosaccharides.

32. (Original) A composition according to claim 31, wherein said oligosaccharides derived from C₃ to C₅ monosaccharides are chosen from xylobiose.

33. (Original) A composition according to claim 1, wherein said at least one C₁ to C₂₂ carbon chain is chosen from linear, branched and cyclic C₁ to C₂₂ carbon chains, which are saturated or unsaturated.

34. (Original) A composition according to claim 1, wherein said at least one C₁ to C₂₂ carbon chain is substituted.

35. (Original) A composition according to claim 1, wherein said at least one C₁ to C₂₂ carbon chain is chosen from C₁₆ to C₁₈ carbon chains.

36. (Original) A composition according to claim 1, wherein said at least one C₁ to C₂₂ carbon chain is chosen from C₁₆ carbon chains and C₁₈ carbon chains.

37. (Original) A composition according to claim 36, wherein said C₁₆ carbon chains are linear hexadecyl chains.

38. (Original) A composition according to claim 36, wherein said C₁₈ carbon chains are linear octadecyl chains.

39. (Original) A composition according to claim 1, wherein said at least one sugar is substituted with said at least one C₁ to C₂₂ carbon chain at the C1 position of said at least one sugar.

40. (Original) A composition according to claim 1, wherein said at least one sugar is substituted with said at least one C₁ to C₂₂ carbon chain at at least one of the hydroxyl groups of said at least one sugar.

41. (Original) A composition according to claim 1, wherein said at least one sugar is present in said composition in an amount ranging from 0.01% to 10% by weight relative to the total weight of the composition.

42. (Original) A composition according to claim 41, wherein said at least one sugar is present in said composition in an amount ranging from 0.1% to 5% by weight relative to the total weight of the composition.

43. (Original) A composition according to claim 1, wherein said composition further comprises at least one additional sugar different from said at least one sugar chosen from C₃ to C₅ monosaccharides substituted with at least one C₁ to C₂₂ carbon chain.

44. (Original) A composition according to claim 43, wherein said at least one additional sugar is chosen from monosaccharides, oligosaccharides, and polysaccharides.

45. (Original) A composition according to claim 44, wherein said monosaccharides are chosen from hexoses.

46. (Original) A composition according to claim 45, wherein said hexoses are chosen from allose, altrose, glucose, mannose, gulose, idose, galactose, talose, sorbose, psicose, fructose, and tagatose.

47. (Original) A composition according to claim 43, wherein said at least one additional sugar is substituted with at least one C₁ to C₂₂ carbon chain.

48. (Original) A composition according to claim 47, wherein said at least one C₁ to C₂₂ carbon chain is chosen from linear, branched and cyclic C₁ to C₂₂ carbon chains, which are saturated or unsaturated.

49. (Original) A composition according to claim 48, wherein said at least one C₁ to C₂₂ carbon chain is chosen from C₁₆ to C₁₈ carbon chains.

50. (Original) A composition according to claim 49, wherein said at least one C₁ to C₂₂ carbon chain is chosen from C₁₆ carbon chains and C₁₈ carbon chains.

51. (Original) A composition according to claim 50, wherein said C₁₆ carbon chains are linear hexadecyl chains.

52. (Original) A composition according to claim 50, wherein said C₁₈ carbon chains are linear octadecyl chains.

53. (Original) A composition according to claim 47, wherein said at least one additional sugar is substituted with said at least one C₁ to C₂₂ carbon chain at the C1 position of said at least one additional sugar.
54. (Original) A composition according to claim 43, wherein said at least one additional sugar is present in said composition in an amount ranging from 0.01% to 10% by weight relative to the total weight of the composition.
55. (Original) A composition according to claim 54, wherein said at least one additional sugar is present in said composition in an amount ranging from 0.1% to 5% by weight relative to the total weight of the composition.
56. (Original) A composition according to claim 1, wherein said composition is in the form of a liquid, oil, paste, stick, dispersion, emulsion, lotion, gel, or cream.
57. (Original) A composition according to claim 1, wherein said at least one keratinous fiber is hair.
58. (Original) A composition according to claim 1, further comprising at least one suitable additive chosen from anionic surfactants, cationic surfactants, nonionic surfactants, amphoteric surfactants, fragrances, penetrating agents, antioxidants, sequestering agents, opacifying agents, solubilizing agents, emollients, colorants, screening agents, preserving agents, proteins, vitamins, silicones, polymers, plant oils, mineral oils, and synthetic oils.

59. (Original) A composition according to claim 1, wherein said composition is heat-activated.

60. (Withdrawn) A method for caring for or treating at least one keratinous fiber comprising:

applying to said at least one keratinous fiber a composition comprising:

(a) at least one compound comprising at least two quaternary ammonium groups; and

(b) at least one sugar chosen from C₃ to C₅ monosaccharides substituted with at least one C₁ to C₂₂ carbon chain; and

heating said at least one keratinous fiber,

wherein said at least one compound and at least one sugar are present in an amount effective to care for or treat said at least one keratinous fiber, and

further wherein said composition is applied prior to or during said heating.

61. (Withdrawn) A method according to claim 60, further comprising wetting said at least one keratinous fiber with water prior to said application.

62. (Withdrawn) A method according to claim 60, further comprising shampooing said at least one keratinous fiber subsequent to said heating.

63. (Withdrawn) A method according to claim 62, further comprising rinsing said at least one keratinous fiber subsequent to said shampooing.

64. (Withdrawn) A method according to claim 60, wherein said at least two quaternary ammonium groups, which may be identical or different, are each chosen

from ammonium groups which are quaternized and amine groups which are capable of being quaternized.

65. (Withdrawn) A method according to claim 64, wherein said amine groups which are capable of being quaternized are chosen from primary amine groups, secondary amine groups, and tertiary amine groups.

66. (Withdrawn) A method according to claim 60, wherein said at least two quaternary ammonium groups, which may be identical or different, are each chosen from substituent ammonium groups which are quaternized, substituent amino groups capable of being quaternized, ammonium groups which are quaternized which form part of the skeleton of said at least one compound and amino groups capable of being quaternized which form part of the skeleton of said at least one compound.

67. (Withdrawn) A method according to claim 60, wherein said at least one compound comprising at least two quaternary ammonium groups is chosen from:

- polymers comprising at least two quaternary ammonium groups derived from (i) at least one monomer unit comprising at least two quaternary ammonium groups as defined below and optionally (ii) at least one additional monomer unit different from said at least one monomer (i); and

- polymers comprising at least two quaternary ammonium groups derived from (i) at least one monomer comprising at least one quaternary ammonium group as defined herein and optionally (ii) at least one additional monomer unit.

68. (Withdrawn) A method according to claim 67, wherein said at least one compound comprising at least two quaternary ammonium groups is chosen from:

- polymers comprising at least two quaternary ammonium groups derived from at least one vinyl monomer;
- cationic diallyl quaternary ammonium polymers comprising at least two quaternary ammonium groups;
- derivatives of polysaccharide polymers comprising at least two quaternary ammonium groups; and
- silicone polymers comprising at least two quaternary ammonium groups.

69. (Withdrawn) A method according to claim 68, wherein said at least one compound comprising at least two quaternary ammonium groups is chosen from:

- polymers comprising at least two quaternary ammonium groups derived from at least one vinyl monomer substituted with at least one group chosen from dialkylaminoalkyl acrylate, dialkylaminoalkyl methacrylate, monoalkylaminoalkyl acrylate, monoalkylaminoalkyl methacrylate, trialkyl methacryloxyalkyl ammonium salts, trialkyl acryloxyalkyl ammonium salts and diallyl quaternary ammonium salts;
- polymers comprising at least two quaternary ammonium groups derived from at least one vinyl quaternary ammonium monomer comprising at least one cyclic cationic nitrogen-containing ring;
- copolymers comprising at least two quaternary ammonium groups derived from (i) at least one vinyl monomer comprising at least one quaternary ammonium group and (ii) at least one additional monomer chosen from acrylamide, methacrylamide, alkyl

acrylamides, dialkyl acrylamides, alkyl methacrylamides, dialkyl methacrylamides, alkyl acrylate, alkyl methacrylate, vinyl caprolactone, vinyl pyrrolidone, vinyl esters, vinyl alcohol, maleic anhydride, propylene glycol, and ethylene glycol;

- cationic cellulose comprising at least two quaternary ammonium groups;
- cationic starch derivatives comprising at least two quaternary ammonium groups;
- cationic guar gum derivatives comprising at least two quaternary ammonium groups; and
- cellulose ethers comprising at least two quaternary ammonium groups.

70. (Withdrawn) A method according to claim 69, wherein said at least one compound comprising at least two quaternary ammonium groups is chosen from polyquaternium-16; polyquaternium-11; quaternized poly(vinylamine); quaternized poly-4-vinyl pyridine; quaternized poly(ethyleneimine); polyquaternium-6; polyquaternium-7; polyquaternium-22; polyquaternium-39; polyquaternium-10; polyquaternium-24; quaternized starch; and amodimethicone.

71. (Withdrawn) A method according to claim 69, wherein said at least one compound comprising at least two quaternary ammonium groups is polyquaternium-10.

72. (Withdrawn) A method according to claim 69, wherein said at least one compound comprising at least two quaternary ammonium groups is polyquaternium-22.

73. (Withdrawn) A method according to claim 69, wherein said at least one compound comprising at least two quaternary ammonium groups is poly(ethyleneimine).

74. (Withdrawn) A method according to claim 69, wherein said at least one compound comprising at least two quaternary ammonium groups is quaternized starch.
75. (Withdrawn) A method according to claim 60, wherein said at least one compound comprising at least two quaternary ammonium groups further comprises at least one counterion.
76. (Withdrawn) A method according to claim 60, wherein said at least one compound comprising at least two quaternary ammonium groups is present in an amount ranging from 0.01% to 10% by weight relative to the total weight of the composition.
77. (Withdrawn) A method according to claim 76, wherein said at least one compound comprising at least two quaternary ammonium groups is present in an amount ranging from 0.1% to 5% by weight relative to the total weight of the composition.
78. (withdrawn) A method according to claim 60, wherein said C₃ to C₅ monosaccharides are chosen from pentoses.
79. (Withdrawn) A method according to claim 78, wherein said pentoses are chosen from aldopentoses and ketopentoses.
80. (Withdrawn) A method according to claim 79, wherein said aldopentoses are chosen from xylose, arabinose, lyxose, and ribose.

81. (Withdrawn) A method according to claim 79, wherein said ketopentoses are chosen from ribulose and xylulose.
82. (Withdrawn) A method according to claim 60, wherein said C₃ to C₅ monosaccharides are chosen from tetroses.
83. (Withdrawn) A method according to claim 82, wherein said tetroses are chosen from aldotetroses and ketotetroses.
84. (Withdrawn) A method according to claim 83, wherein said aldotetroses are chosen from erythrose and treose.
85. (Withdrawn) A method according to claim 83, wherein said aldotetroses are chosen from erythrulose.
86. (Withdrawn) A method according to claim 60, wherein said C₃ to C₅ monosaccharides are chosen from trioses.
87. (Withdrawn) A method according to claim 86, wherein said trioses are chosen from aldotrioses and ketotrioses.
88. (Withdrawn) A method according to claim 87, wherein said trioses are chosen from glyceraldehyde.
89. (Withdrawn) A method according to claim 87, wherein said trioses are chosen from dihydroxyacetone.

90. (Withdrawn) A method according to claim 60, wherein said C₃ to C₅ monosaccharides are chosen from furanoses and derivatives thereof.
91. (Withdrawn) A method according to claim 60, wherein said C₃ to C₅ monosaccharides are chosen from derivatives of C₃ to C₅ monosaccharides.
92. (Withdrawn) A method according to claim 90, wherein said derivatives of C₃ to C₅ monosaccharides are chosen from imine derivatives of C₃ to C₅ monosaccharides, hemiacetal derivatives of C₃ to C₅ monosaccharides, hemiketal derivatives of C₃ to C₅ monosaccharides, and oxidized derivatives of C₃ to C₅ monosaccharides.
93. (Withdrawn) A method according to claim 90, wherein said derivatives of C₃ to C₅ monosaccharides are chosen from oligosaccharides derived from said C₃ to C₅ monosaccharides.
94. (Withdrawn) A method according to claim 93, wherein said oligosaccharides derived from said C₃ to C₅ monosaccharides are chosen from xylobiose.
95. (Withdrawn) A method according to claim 60, wherein said at least one C₁ to C₂₂ carbon chain is chosen from linear, branched and cyclic C₁ to C₂₂ carbon chains, which are saturated or unsaturated.
96. (Withdrawn) A method according to claim 60, wherein said at least one C₁ to C₂₂ carbon chain is substituted.
97. (Withdrawn) A method according to claim 60, wherein said at least one C₁ to C₂₂ carbon chain is chosen from C₁₆ to C₁₈ carbon chains.

98. (Withdrawn) A method according to claim 60, wherein said at least one C₁ to C₂₂ carbon chain is chosen from C₁₆ carbon chains and C₁₈ carbon chains.

99. (Withdrawn) A method according to claim 98, wherein said C₁₆ carbon chains are linear hexadecyl chains.

100. (Withdrawn) A method according to claim 98, wherein said C₁₈ carbon chains are linear octadecyl chains.

101. (Withdrawn) A method according to claim 60, wherein said at least one sugar is substituted with said at least one C₁ to C₂₂ carbon chain at the C1 position of said at least one sugar.

102. (Withdrawn) A method according to claim 60, wherein said at least one sugar is substituted with said at least one C₁ to C₂₂ carbon chain at at least one of the hydroxyl groups of said at least one sugar.

103. (Withdrawn) A method according to claim 60, wherein said at least one sugar is present in said composition in an amount ranging from 0.01% to 10% by weight relative to the total weight of the composition.

104. (Withdrawn) A method according to claim 103, wherein said at least one sugar is present in said composition in an amount ranging from 0.1% to 5% by weight relative to the total weight of the composition.

105. (Withdrawn) A method according to claim 60, wherein said composition further comprises at least one additional sugar different from said at least one sugar chosen from C₃ to C₅ monosaccharides substituted with at least one C₁ to C₂₂ carbon chain.

106. (Withdrawn) A method according to claim 105, wherein said at least one additional sugar is chosen from monosaccharides, oligosaccharides and polysaccharides.

107. A method according to claim 106, wherein said monosaccharides are chosen from hexoses.

108. (Withdrawn) A method according to claim 107, wherein said hexoses are chosen from allose, altrose, glucose, mannose, gulose, idose, galactose, talose, sorbose, psicose, fructose, and tagatose.

109. (Withdrawn) A method according to claim 105, wherein said at least one additional sugar is substituted with at least one C₁ to C₂₂ carbon chain.

110. (Withdrawn) A method according to claim 109, wherein said at least one C₁ to C₂₂ carbon chain is chosen from linear, branched and cyclic C₁ to C₂₂ carbon chains, which are saturated or unsaturated.

111. (Withdrawn) A method according to claim 110, wherein said at least one C₁ to C₂₂ carbon chain is chosen from C₁₆ to C₁₈ carbon chains.

112. (Withdrawn) A method according to claim 110, wherein said at least one C₁ to C₂₂ carbon chain is chosen from C₁₆ carbon chains and C₁₈ carbon chains.

113. (Withdrawn) A method according to claim 112, wherein said C₁₆ carbon chains are linear hexadecyl chains.

114. (Withdrawn) A method according to claim 112, wherein said C₁₈ carbon chains are linear octadecyl chains.

115. (Withdrawn) A method according to claim 109, wherein said at least one additional sugar is substituted with said at least one C₁ to C₂₂ carbon chain at the C₁ position of said at least one additional sugar.

116. (Withdrawn) A method according to claim 105, wherein said at least one additional sugar is present in said composition in an amount ranging from 0.01% to 10% by weight relative to the total weight of the composition.

117. (Withdrawn) A method according to claim 116, wherein said at least one additional sugar is present in said composition in an amount ranging from 0.1% to 5% by weight relative to the total weight of the composition.

118. (Withdrawn) A method according to claim 60, wherein said composition is in the form of a liquid, oil, paste, stick, dispersion, emulsion, lotion, gel, or cream.

119. (Withdrawn) A method according to claim 60, wherein said at least one keratinous fiber is hair.

120. (Withdrawn) A method according to claim 60, further comprising at least one suitable additive chosen from anionic surfactants, cationic surfactants, nonionic surfactants, amphoteric surfactants, fragrances, penetrating agents, antioxidants,

sequestering agents, opacifying agents, solubilizing agents, emollients, colorants, screening agents, preserving agents, proteins, vitamins, silicones, polymers, plant oils, mineral oils, and synthetic oils.

121. (Withdrawn) A method according to claim 60, wherein said composition is applied prior to and during said heating.

122. (Withdrawn) A method according to claim 60, wherein said composition cares for and treats at least one keratinous fiber.

123. (Withdrawn) A method for durably conditioning at least one keratinous fiber comprising:

applying to said at least one keratinous fiber a composition comprising:

(a) at least one compound comprising at least two quaternary ammonium groups; and

(b) at least one sugar chosen from C₃ to C₅ monosaccharides substituted with at least one C₁ to C₂₂ carbon chain; and

heating said at least one keratinous fiber,

wherein said at least one compound and at least one sugar are present in an amount effective to durably condition said at least one keratinous fiber, and further wherein said composition is applied prior to or during said heating.

124. (Withdrawn) A method according to claim 123, further comprising wetting said at least one keratinous fiber with water prior to said applying.

125. (Withdrawn) A method according to claim 123, further comprising shampooing said at least one keratinous fiber subsequent to said heating.

126. (Withdrawn) A method according to claim 125, further comprising rinsing said at least one keratinous fiber subsequent to said shampooing.

127. (Withdrawn) A method according to claim 123, wherein said at least two quaternary ammonium groups, which may be identical or different, are each chosen from ammonium groups which are quaternized and amine groups which are capable of being quaternized.

128. (Withdrawn) A method according to claim 127, wherein said amine groups which are capable of being quaternized are chosen from primary amine groups, secondary amine groups, and tertiary amine groups.

129. (Withdrawn) A method according to claim 123, wherein said at least two quaternary ammonium groups, which may be identical or different, are each chosen from substituent ammonium groups which are quaternized, substituent amino groups capable of being quaternized, ammonium groups which are quaternized which form part of the skeleton of said at least one compound and amino groups capable of being quaternized which form part of the skeleton of said at least one compound.

130. (Withdrawn) A method according to claim 123, wherein said at least one compound comprising at least two quaternary ammonium groups is chosen from:

- polymers comprising at least two quaternary ammonium groups derived from (i)
at least one monomer unit comprising at least two quaternary ammonium groups as

defined below and optionally (ii) at least one additional monomer unit different from said at least one monomer (i); and

- polymers comprising at least two quaternary ammonium groups derived from (i) at least one monomer comprising at least one quaternary ammonium group as defined herein and optionally (ii) at least one additional monomer unit.

131. (Withdrawn) A method according to claim 130, wherein said at least one compound comprising at least two quaternary ammonium groups is chosen from:

- polymers comprising at least two quaternary ammonium groups derived from at least one vinyl monomer;

- cationic diallyl quaternary ammonium polymers comprising at least two quaternary ammonium groups;

- derivatives of polysaccharide polymers comprising at least two quaternary ammonium groups; and

- silicone polymers comprising at least two quaternary ammonium groups.

132. (Withdrawn) A method according to claim 131, wherein said at least one compound comprising at least two quaternary ammonium groups is chosen from:

- polymers comprising at least two quaternary ammonium groups derived from at least one vinyl monomer substituted with at least one group chosen from dialkylaminoalkyl acrylate, dialkylaminoalkyl methacrylate, monoalkylaminoalkyl acrylate, monoalkylaminoalkyl methacrylate, trialkyl methacryloxyalkyl ammonium salts, trialkyl acryloxyalkyl ammonium salts and diallyl quaternary ammonium salts;

- polymers comprising at least two quaternary ammonium groups derived from at

least one vinyl quaternary ammonium monomer comprising at least one cyclic cationic nitrogen-containing ring;

- copolymers comprising at least two quaternary ammonium groups derived from
 - (i) at least one vinyl monomer comprising at least one quaternary ammonium group and
 - (ii) at least one additional monomer chosen from acrylamide, methacrylamide, alkyl acrylamides, dialkyl acrylamides, alkyl methacrylamides, dialkyl methacrylamides, alkyl acrylate, alkyl methacrylate, vinyl caprolactone, vinyl pyrrolidone, vinyl esters, vinyl alcohol, maleic anhydride, propylene glycol, and ethylene glycol;
- cationic cellulose comprising at least two quaternary ammonium groups;
- cationic starch derivatives comprising at least two quaternary ammonium groups;
- cationic guar gum derivatives comprising at least two quaternary ammonium groups; and
- cellulose ethers comprising at least two quaternary ammonium groups.

133. (Withdrawn) A method according to claim 132, wherein said at least one compound comprising at least two quaternary ammonium groups is chosen from polyquaternium-16; polyquaternium-11; quaternized poly(vinylamine); quaternized poly-4-vinyl pyridine; quaternized poly(ethyleneimine); polyquaternium-6; polyquaternium-7; polyquaternium-22; polyquaternium-39; polyquaternium-10; polyquaternium-24; quaternized starch; and amodimethicone.

134. (Withdrawn) A method according to claim 132, wherein said at least one compound comprising at least two quaternary ammonium groups is polyquaternium-10.

135. (Withdrawn) A method according to claim 132, wherein said at least one compound comprising at least two quaternary ammonium groups is polyquaternium-22.
136. (Withdrawn) A method according to claim 132, wherein said at least one compound comprising at least two quaternary ammonium groups is poly(ethyleneimine).
137. (Withdrawn) A method according to claim 132, wherein said at least one compound comprising at least two quaternary ammonium groups is quaternized starch.
138. (Withdrawn) A method according to claim 123, wherein said at least one compound comprising at least two quaternary ammonium groups further comprises at least one counterion.
139. (Withdrawn) A method according to claim 123, wherein said at least one compound comprising at least two quaternary ammonium groups is present in an amount ranging from 0.01% to 10% by weight relative to the total weight of the composition.
140. (Withdrawn) A method according to claim 139, wherein said at least one compound comprising at least two quaternary ammonium groups is present in an amount ranging from 0.1% to 5% by weight relative to the total weight of the composition.
141. (Withdrawn) A method according to claim 123, wherein said C₃ to C₅ monosaccharides are chosen from pentoses.

142. (Withdrawn) A method according to claim 141, wherein said pentoses are chosen from aldopentoses and ketopentoses.

143. (Withdrawn) A method according to claim 142, wherein said aldopentoses are chosen from xylose, arabinose, lyxose, and ribose.

144. (Withdrawn) A method according to claim 142, wherein said ketopentoses are chosen from ribulose and xylulose.

145. (Withdrawn) A method according to claim 123, wherein said C₃ to C₅ monosaccharides are chosen from tetroses.

146. (Withdrawn) A method according to claim 145, wherein said tetroses are chosen from aldotetroses and ketotetroses.

147. (Withdrawn) A method according to claim 146, wherein said aldotetroses are chosen from erythrose and treose.

148. (Withdrawn) A method according to claim 146, wherein said aldotetroses are chosen from erythrulose.

149. (Withdrawn) A method according to claim 123, wherein said C₃ to C₅ monosaccharides are chosen from trioses.

150. (Withdrawn) A method according to claim 149, wherein said trioses are chosen from aldotrioses and ketotrioses.

151. (Withdrawn) A method according to claim 150, wherein said trioses are chosen from glyceraldehyde.

152. (Withdrawn) A method according to claim 150, wherein said trioses are chosen from dihydroxyacetone.

153. (Withdrawn) A method according to claim 123, wherein said C₃ to C₅ monosaccharides are chosen from furanoses and derivatives thereof.

154. (Withdrawn) A method according to claim 123, wherein said C₃ to C₅ monosaccharides are chosen from derivatives of C₃ to C₅ monosaccharides.

155. (Withdrawn) A method according to claim 154, wherein said derivatives of C₃ to C₅ monosaccharides are chosen from imine derivatives of C₃ to C₅ monosaccharides, hemiacetal derivatives of C₃ to C₅ monosaccharides, hemiketal derivatives of C₃ to C₅ monosaccharides, and oxidized derivatives of C₃ to C₅ monosaccharides.

156. (Withdrawn) A method according to claim 154, wherein said derivatives of C₃ to C₅ monosaccharides are chosen from oligosaccharides derived from said C₃ to C₅ monosaccharides.

157. (Withdrawn) A method according to claim 156, wherein said oligosaccharides derived from said C₃ to C₅ monosaccharides are chosen from xylobiose.

158. (Withdrawn) A method according to claim 123, wherein said at least one C₁ to C₂₂ carbon chain is chosen from linear, branched and cyclic C₁ to C₂₂ carbon chains, which are saturated or unsaturated.

159. (Withdrawn) A method according to claim 123, wherein said at least one C₁ to C₂₂ carbon chain is substituted.

160. (Withdrawn) A method according to claim 123, wherein said at least one C₁ to C₂₂ carbon chain is chosen from C₁₆ to C₁₈ carbon chains.

161. (Withdrawn) A method according to claim 123, wherein said at least one C₁ to C₂₂ carbon chain is chosen from C₁₆ carbon chains and C₁₈ carbon chains.

162. (Withdrawn) A method according to claim 161, wherein said C₁₆ carbon chains are linear hexadecyl chains.

163. (Withdrawn) A method according to claim 161, wherein said C₁₈ carbon chains are linear octadecyl chains.

164. (Withdrawn) A method according to claim 123, wherein said at least one sugar is substituted with said at least one C₁ to C₂₂ carbon chain at the C1 position of said at least one sugar.

165. (Withdrawn) A method according to claim 123, wherein said at least one sugar is substituted with said at least one C₁ to C₂₂ carbon chain at at least one of the hydroxyl groups of said at least one sugar.

166. (Withdrawn) A method according to claim 123, wherein said at least one sugar is present in said composition in an amount ranging from 0.01% to 10% by weight relative to the total weight of the composition.

167. (Withdrawn) A method according to claim 166, wherein said at least one sugar is present in said composition in an amount ranging from 0.1% to 5% by weight relative to the total weight of the composition.
168. (Withdrawn) A method according to claim 123, wherein said composition further comprises at least one additional sugar different from said at least one sugar chosen from C₃ to C₅ monosaccharides substituted with at least one C₁ to C₂₂ carbon chain.
169. (Withdrawn) A method according to claim 168, wherein said at least one additional sugar is chosen from monosaccharides, oligosaccharides and polysaccharides.
170. (Withdrawn) A method according to claim 169, wherein said monosaccharides are chosen from hexoses.
171. (Withdrawn) A method according to claim 170, wherein said hexoses are chosen from allose, altrose, glucose, mannose, gulose, idose, galactose, talose, sorbose, psicose, fructose, and tagatose.
172. (Withdrawn) A method according to claim 168, wherein said at least one additional sugar is substituted with at least one C₁ to C₂₂ carbon chain.
173. (Withdrawn) A method according to claim 172, wherein said at least one C₁ to C₂₂ carbon chain is chosen from linear, branched and cyclic C₁ to C₂₂ carbon chains, which are saturated or unsaturated.

174. (Withdrawn) A method according to claim 173, wherein said at least one C₁ to C₂₂ carbon chain is chosen from C₁₆ to C₁₈ carbon chains.

175. (Withdrawn) A method according to claim 173, wherein said at least one C₁ to C₂₂ carbon chain is chosen from C₁₆ carbon chains and C₁₈ carbon chains.

176. (Withdrawn) A method according to claim 175, wherein said C₁₆ carbon chains are linear hexadecyl chains.

177. (Withdrawn) A method according to claim 175, wherein said C₁₈ carbon chains are linear octadecyl chains.

178. (Withdrawn) A method according to claim 172, wherein said at least one additional sugar is substituted with said at least one C₁ to C₂₂ carbon chain at the C1 position of said at least one additional sugar.

179. (Withdrawn) A method according to claim 168, wherein said at least one additional sugar is present in said composition in an amount ranging from 0.01% to 10% by weight relative to the total weight of the composition.

180. (Withdrawn) A method according to claim 179, wherein said at least one additional sugar is present in said composition in an amount ranging from 0.1% to 5% by weight relative to the total weight of the composition.

181. (Withdrawn) A method according to claim 123, wherein said composition is in the form of a liquid, oil, paste, stick, dispersion, emulsion, lotion, gel, or cream.

182. (Withdrawn) A method according to claim 123, wherein said at least one keratinous fiber is hair.

183. (Withdrawn) A method according to claim 123, further comprising at least one suitable additive chosen from anionic surfactants, cationic surfactants, nonionic surfactants, amphoteric surfactants, fragrances, penetrating agents, antioxidants, sequestering agents, opacifying agents, solubilizing agents, emollients, colorants, screening agents, preserving agents, proteins, vitamins, silicones, polymers, plant oils, mineral oils, and synthetic oils.

184. (Withdrawn) A method according to claim 123, wherein said composition is applied prior to and during said heating.

185. (Withdrawn) A kit for caring for, treating or durably conditioning at least one keratinous fiber comprising at least two compartments,

wherein a first compartment comprises at least one compound comprising at least two quaternary ammonium groups; and

wherein a second compartment comprises at least one sugar chosen from C₃ to C₅ monosaccharides substituted with at least one C₁ to C₂₂ carbon chain.

186. (Withdrawn) A kit according to claim 185, wherein at least one of said at least two compartments further comprises at least one additional sugar, different from said at least one sugar chosen from C₃ to C₅ monosaccharides substituted with at least one C₁ to C₂₂ carbon chain.

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B. Evidence Appendix to Appeal Brief Under Rule 41.37(c)(1)(ix)

No evidence submitted pursuant to §§ 1.130-1.132 or any other evidence entered by the Office is relied upon by Appellants in this appeal.

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C. Related Proceedings Appendix to Appeal Brief Under Rule 41.37(c)(1)(x)

No decisions in related proceedings were identified in this Appeal Brief.